The Manual

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Thanks also from Geoff to Rob, Jim and J.T. for all their help and support. And very special thanks to Patria for making the whole project possible.

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Deluxe Music Construction Set

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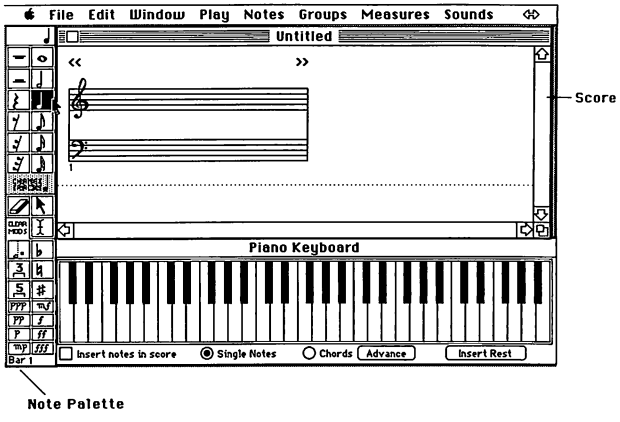
The world of music offers virtually endless possibilities for richness, variety, complexity and depth. And Deluxe Music Construction Set is powerful enough to help you explore a huge portion of that world. It can't take you everywhere that learning to play an instrument will take you, but neither can learning to play an instrument take you everywhere the program can.

HOW THIS MANUAL IS ORGANIZED—This manual does not pretend to teach you music. On the other hand, it does not presume that you need to be taught music theory to learn how to make music with the program. Next in this section is a quick look at the overall organization of the program. Then Parts I, II, and III contain guides to the basics of playing, entering and printing music.

You may use the guides as a kind of tutorial if you wish; they were arranged with an eye toward that possibility, but can be used in any order that suits your interest and needs. Part IV suggests places to turn for help when your curiosity drives you deeper into the subject matter of music itself.

Part V contains a keyboard shortcut summary and summaries of the uses and effects of each menu command and program tool. There are two brief glossaries—one for computer-related terms and another for musical ones—and an index at the end.



USING THE PROGRAM WINDOWS—At the center of the action is the **Score** window. You can put music into it in three ways: by loading it from a disk (there are several pieces of music included on the Deluxe Music Construction Set program disk); by clicking on the score itself with the cursor (after first selecting the kind of note you want in the **Note Palette** window); and by clicking on the keys of the **Piano Keyboard** window (after first clicking on the "insert notes in score" box).

The other two windows, **Score Setup** and **Memory Usage**, don't appear automatically at start up but can be opened with their commands in the Window menu. All the windows can be opened this way, or brought to the top if they already are open. And windows can be brought to the top by clicking on their title bars.

Unlike some windows you may have worked with, "being on top" and "being active" don't mean the same thing in this program. Any part of a Deluxe Music Construction Set window which is visible is also active. This was done deliberately so you would be able to use several windows at once without the hassle of an extra mouse click just to make the new window active each time you change windows.

Making each a window was also deliberate. Each contains controls or information you will want to use at different times with different companion windows. Because each is a window, each will remain on the screen until you close it (with the close box in the upper left hand corner), and each can be moved around to suit your working needs.

It's a scheme designed to give you maximum flexibility regarding what's open where, so you can tailor the screen to suit your working style and the nature of the work you're undertaking.

HOW TO SELECT MUSIC AND MEASURES—Music must first be entered into the score a note at a time, but once it's there it can be manipulated in much larger chunks—a fact that lies at the heart of some of Deluxe Music's more impressive powers.

The rule for all these manipulations is simple: first identify the music you want to change by selecting it (causing it to be displayed in outline form), then choose a command—Copy, Up Level, Set Play Style, Beam Notes, Slur Notes, etc.— to act on the selected music.

Selecting music is equally simple: select the **arrow** tool in the **Note Palette** and click directly on a note or chord, or use it to drag a selection box around any group of notes and chords. If you select music, and then hold down the Shift key and select more music, all the music in between will be selected as well (a handy trick for selecting more music than will fit on the screen at once).

For some commands, simply identifying a measure is sufficient (the commands in the Measures menu, for instance, work this way). To identify a measure, select one or more notes in it, or just click the insertion point into the measure between the notes. Clicking the insertion point into a measure is also the way to identify a particular location for a command like Paste or Split Measure to take effect.

DRAGGING NOTES, CHORDS AND BAR LINES TO NEW POSITIONS—Last but not least, there's the important fact that notes once entered are not immovable. Point at a note and press, then drag up and down with the **arrow** while continuing to press and you'll hear the possible locations sound in turn. Let go and the note will be moved to the location being sounded at the moment.

Deluxe Music also offers the ability to move notes and chords horizontally in the same manner—just grab them with the arrow and slide them. This feature lets you reposition notes and rests so that symbols don't clash with each other in complex music (i.e., so a rest for one track doesn't obscure a note in another, etc.) Additionally, if you hold down the Option key while you grab and drag, you'll make a copy of the note or chord.

If you need more room in a measure, you can grab the bar line and slide it as well. If you want to return a measure to its original size and note spacing arrangement, identify the measure with the insertion point or a selection and choose **Realign Measure** in the **Measures** menu.

SUMMARY—Windows are active if they are visible. Use the **Window** menu to open them and use it or a click on the title bar to bring a window to the top.

Notes can be entered with the cursor and the on-screen keyboard. To change music after it's been entered, first select it, then choose the appropriate menu or keyboard command.

To select music, click on notes or chords, or use the **arrow** to drag a selection box around groups of notes and chords. Shift-click on new material to extend a selection.

To move entered notes or rests up and down, grab them with the **arrow** and drag them to a new location. Do the same to drag chords, notes and rests horizontally. Hold down the **Option** key when you drag horizontally to copy the note or chord.

You can also drag bar lines to create more room in a measure. Use **Realign Measure** in the **Measures** menu to return a measure to its original size and note spacing.

PART I: PLAYING MUSIC

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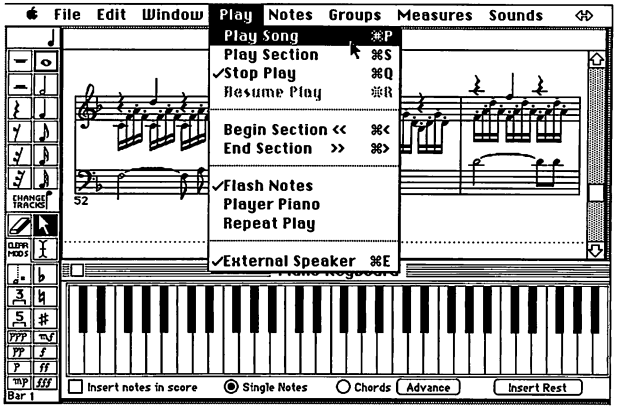

Loading and Playing Music—Use **Open** in the **Files** menu to load music from the disk. Use all the commands in the **Play** menu, plus controls in the **Score Setup** window, to control the playback.

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Starting and Stopping Play—Choose **Play Song** in the **Play** menu to play the music in the score from beginning to end. Press the **Space Bar** to stop play, freezing the display on the portion being played at that instant. (Choose **Stop Play** in the menu to stop the play and return the display to what it showed when you started play.) When play is stopped before the end, use **Resume Play** to start play from the interrupted measure.

Choosing Visual Feedback—Put a check next to either **Flash Notes** or **Player Piano** in the **Play** menu to determine what you see on the screen while the music plays. (Also, watch the bottom of the **Note Palette** to see the number of the measure being played.)

When **Flash Notes** is checked, choosing **Play Song** replaces the music with measureless staff lines. As the music plays, flashing rectangles move through those staff lines showing the pitch and duration for each note as it is played. (Pitch means how high or low a note is on its staff, duration means how long it plays.)

Press the **Space Bar** to bring the actual score back into the display, selecting the notes being flashed at that instant and painting the screen around them. If **Play Section** is used when **Flash Notes** is checked, the music does not move and the notes themselves flash.

When **Player Piano** is checked, the on-screen piano keys are "pressed" as the corresponding notes are played in the score. Be sure to bring the **Piano Keyboard** window to the top (i.e., use its command in the **Window** menu or click on it's title bar) before using this option.

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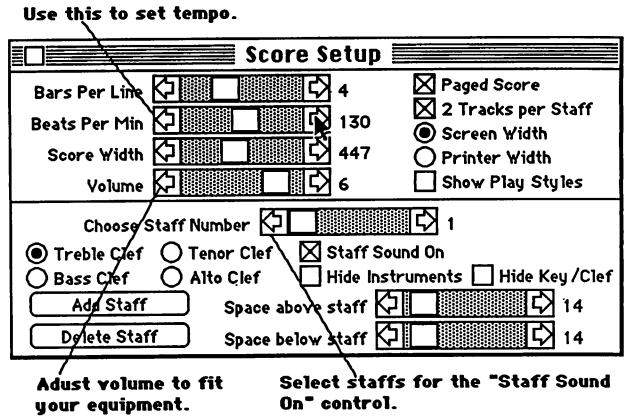
*Using **Flash Notes** with **Play Song** is a good way to let your eyes help your ears listen to particular musical lines. Decide first which staff you want to listen to most closely, then focus your eyes on that staff and listen for the note pattern that fits what you see.*

*You can also use **Flash Notes** and **Player Piano** at the same time to see which piano keys go with which notes, but you should slow the music down first (with the **beats per minute** setting in the **Score Setup** window) so you can see what's going on. (Music with a lot of short notes drags if played too fast with both Player Piano and Flash Notes turned on.)*



Changing Speed and Staff Sound—Select **Score Setup** in the **Window** menu to open the Score Setup window. Slide the **beats per minute** control in that window to the right to speed the music up and to the left to slow it down ("Beats per minute" is the second control from the top).

You can also change the tempo (the musical term for beats per minute) for a passage within a song. First, set the beats per minute control to the number you want. Next, indentify the measure where you want the change to take effect and choose **Set Tempo** in the **Measures** menu. The new setting will appear above the score and will stay in effect until you make another change in a later measure.

To turn the sound off altogether for a staff, first select that staff's number with the **choose staff number** scrolling bar. (It's in the middle, just below the horizontal line. The top staff is number 1, the next is number 2, etc.) Then remove the **X** from the **staff sound on** box by clicking on it. Clicking again turns the sound back on for the indicated staff.

Turning the sound off for particular staffs is another interesting way to sharpen your ear and musical understanding. Try first listening to a staff line by itself, watching its pattern flash as it plays. Then try to hear each note in that staff as you play it with other staffs. Notice how changing the staff you are listening for the hardest while all the staffs play changes the way you hear the other staffs as well.

Defining Sections, Using Repeat Play—Use the **arrow** from the **Note Palette** window to click the insertion point into the first measure in the section you want to define, then use **Begin Section** in the **Play** menu. Identify the measure at the end in the same manner and use **End Section** from the same menu.

You can also define a section by first selecting the music you want with the **arrow** , and then using the **Begin** and **End Section** commands. The selected music appears in outline form, and Begin and End Section mark the measures containing the beginning and end of the selected passage.

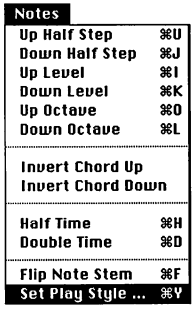
To play a defined section, use **Play Section** in the **Play** menu. If you want it to play over and over, put a check by **Repeat Play,** also in the Play menu, before using Play Section or Play Song.

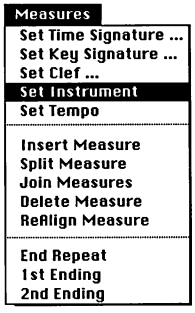
***Repeat Play** works with both **Play Song** and **Play Section,** but it's most useful with sections. Playing the section on the screen over and over, watching the notes flash as they play, helps a lot when you're trying to find and fix things that don't sound right.*

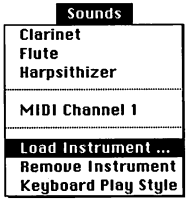
*When you are working with a full composition, you might also find it useful to leave the **Score Setup** window open. You can then use the **bars per line** setting to shrink and grow the number of measures you can see and mark as a section at once.*

Using External Speakers—Each time you start the program this command is checked. If you remove the check, the music is played one octave higher than normal. This is useful for playing music through your computer's internal speaker when the music has notes too low for the internal speaker's range.

If you are connecting to external speakers through a stereo system, you'll want to adjust the **volume** control in the **Score Setup** window. A lower setting (2, or even lower) will most likely improve your ability to smoothly control overall volume through your stereo's amplifier.







Changing Instruments—Choose **Load Instruments** in the **Sounds** menu to add instrument names to that same menu. Pull down on an instrument name to check or "un-check" it. Choose **Set Instrument** in the **Measures** menu to assign the checked instrument to take effect at the measure containing the insertion point. Select some notes, then choose **Set Play Style** in the **Notes** menu to assign play styles (staccato, vibratto, etc.) to passages within an instrument's measures.

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Using One Instrument—If you use **Remove Instrument** in the **Sounds** menu to remove all but one instrument name from the menu, the program automatically assigns that instrument to all the staffs when asked to play a song or section.

Once you've got the menu down to one instrument, changing instruments for the song is simply a matter of choosing **Remove Instrument** to remove the last one there, and **Load Instrument** to add a new one. Doing this repeatedly is a good way to get a feel for different instruments and how they fit with different songs.

When you're using a piece of music to try out different instruments, you may find it convenient to close the Score window so you need not wait for the screen to be redrawn every time you stop the playback. If you'd like some visual feedback, leave the Piano Keyboard open and turn on **Player Piano** in the **Play** menu.

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*If your computer has more than 128K of RAM, there is another way to try out different instruments with a song. First load several instruments into the **Sounds** menu. Next, select at least one note in the first measure of each staff (drag a selection box around the notes or shift-click each one) before closing the Score window.*

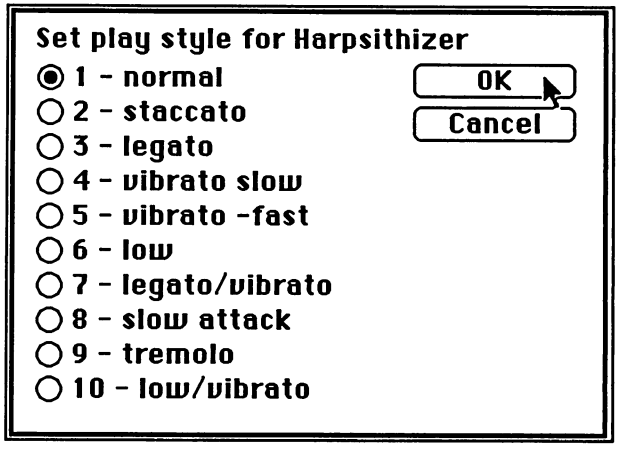
*Changing instruments is then as easy as putting a check next to the instrument you want in the Sounds menu and choosing **Set Instrument** in the **Measures** menu. If you only want to hear the instrument change for part of a song, define that part as a section and select notes at the beginning of the section. Then turn on **Repeat Play** and choose **Play Section** in the **Play** menu.*

The music will cycle endlessly until you stop the playback. Each instrument change you make takes effect the next time the section cycles through it's beginning.

Using Multiple Instruments — You can change instruments at any measure. Select the **arrow** from the **Note Palette** and click the insertion point into the measure where you want the change to take place. Then choose **Set Instrument** in the measures menu.

The instrument currently checked in the **Sounds** menu will be assigned to take effect at that measure and its name will appear above the score. (To remove the names before you print, click on **hide instruments** in the **Score Setup** window for each staff. Use the **choose staff number** control to pick each staff in turn.)

Once assigned to a measure in a staff, instruments stay in effect until a new instrument is assigned to a later measure in the same staff.



Changing Play Styles — Think of play styles as the pedals on a piano or the controls on a synthesizer. One makes the sound seem clipped (staccato), another makes it smooth (legato), yet another "wavy" (vibrato). Different play styles are available for different instruments.

To apply a play style, select a passage with the **arrow**, then choose **Set Play Style** in the **Notes** menu and pick the style you want from the box which will appear. The play style's number will appear above each note affected (or below it, for the second track in two-track music). If you change instruments for a passage after setting its play style, the corresponding play style will be used for the new instrument.

To hide the numbers at print time, click on the **show play styles** box (to remove the x) in the **Score Setup** window. There is one exception to this rule. When "show play styles" is turned off, dots will appear in the score above (or below) notes marked for staccato play back. This feature was included to make it easy to print music with standard staccato markings.

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*To hear a play style before applying it to music in the score, use **Keyboard Play Style** in the **Sounds** menu to assign the style to the keyboard. Then make sure **insert notes in score** is not turned on and click on the piano keys.*

*To study the effects of play style changes in a song, define a screenful of music with the **Begin** and **End Section** commands. Then select a passage within the section with the **arrow**. Turn on **Repeat Play**, then use **Play Section**. As the section plays over and over, use **Set Play Style** to change the play style for the selected passage.*

*For ideas about how to use play styles to add personality to music, study the play style assignments in the music that came on your disk. Click an **X** in the **show play styles** box in the **Score Setup** window and scroll through looking for play style changes. Select such a passage and start it playing, then select new play styles and listen to the difference they make in how the music sounds and feels.*

Using MIDI Instruments—The MIDI standard (MIDI is short for Musical instrument Digital Interface) makes it possible for you to play your music through MIDI compatible synthesizers. The reference card contains information about the computer-to-instrument cables supported by the program.

Putting a check by the **MIDI Channel** command in the middle of the **Sounds** menu makes MIDI Channel the active instrument (i.e., the one that will be assigned if you choose Set Instrument in the Measures menu.). It also puts two new commands in the bottom of the menu, **Set MIDI Channel** and **MIDI preset.**

Set MIDI Channel brings up a box from which you may choose any of 16 different channels. The number of the channel currently chosen is reflected in the MIDI Channel command in the middle of the menu (i.e., it will read MIDI Channel 1 if you pick 1, MIDI Channel 2 if you pick 2, etc.).

The **MIDI Preset** command reflects changes made in the box it brings up when you choose it. The program adheres to the standard of 127 preset instruments, numbered from 1 to 128. If you type 0 in the MIDI Preset box, the menu will read **No MIDI Preset** and none will be assigned.

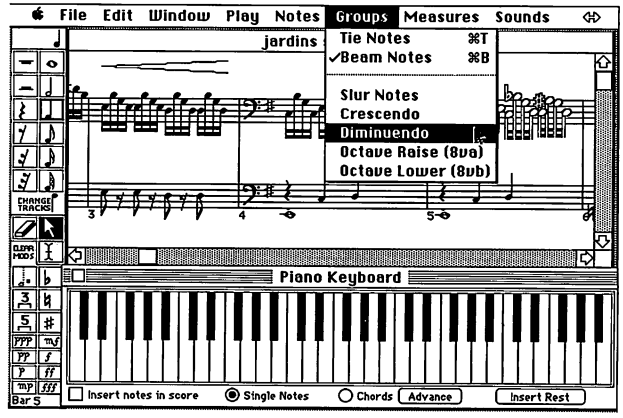
Think of a MIDI channels plus a presets as instruments and assign them to staffs and measures just as you would the Deluxe Music instruments (described in the previous section). You can change channels and presets as often as you like. Just don't assign the same MIDI channel/preset combination to the same measure number in different staffs.

A staff assigned a MIDI channel without a preset will by played by the preset currently in effect for the synthesizer itself. You can use the same channel for all staffs as long as you don't use more than one preset at a time. (The only sure method for finding out which numbers produce which presets on a particular synthesizer is trial and error.)

The dynamic modifiers (described in the next section) also affect playback through an external synthesizer. If you would like to fine tune the control offered by these modifiers, hold down the Command key while you click on a modifier in the Note Palette.

A box will appear into which you can type a whole number between 1 and 127. The higher the number the louder the sound. (The number is in fact the number that will be sent to the synthesizer for "key velocity'".) The values entered for the dynamic modifiers in the Note Palette are saved with each song. Whenever you load a song, the Note Palette modifier values saved with it will be loaded as well.

You can also set a new value for any individual modifier after it has been entered into the score. Just click on the modifier with the arrow while holding down the Command key, then type the number you want into the box which will appear. Deluxe Music will redraw the dynamic modifier if necessary to reflect the change you made (i.e if the *mp* setting in the Palette is 65 and you change an *mp* in the score to 66, the program will redraw it as an *mf* since that's the next highest modifier in the Palette.



Controlling Dynamics—Use **Crescendo** and **Diminuendo** in the **Groups** menu and the ***fff*** through ***ppp*** modifiers in the **Note Palette** window to shape the volume levels between and within staffs to give your music balance and interest.

The ***fff*** through ***ppp*** symbols may be applied to a staff at any point. Just select the desired symbol in the **note Palette** and click in the area above the staff. ***fff*** means "full volume" and ***ppp*** means "very soft". The other settings range between those extremes. Music always starts at full volume and changes only when it encounters a dynamic symbol.

Use the eraser to remove a dynamic symbol from the score (put it directly over what you want to erase and click). You may also grab dynamic symbols and move them to other staffs or to other locations in the same staff.

(Note to advanced users: If you would like to experiment with a finer degree of control over dynamic settings, see the discussion of dynamic modifiers at the end of the "Using MIDI Instruments" section on page 10.)

Crescendo (<) and **Diminuendo** (>) mean "play these notes gradually louder or softer" respectively. Just select the notes you want them to apply to with the **arrow**, then choose the command you want in the **Groups** menu.

The notes will be played starting with the volume level in effect at the beginning of the crescendo or diminuendo sign and will grow gradually louder or softer until *fff* or *ppp* is reached. If you want to stop short of *fff* or *ppp*, place a dynamic symbol inside the crescendo or diminuendo sign describing the stopping place you want

To remove a crescendo or diminuendo mark from the score, select any of the notes covered by the sign and choose the appropriate command again.

To study the effects of the dynamic symbols, play with them in the music that came on your disk. LIsten for volume changes in the music and press ***space bar*** *to stop the music and bring it into the display so you can see how it's marked.*

Find places where one staff is marked ***mf*** *and an adjacent one is marked* ***mp.*** *Listen to the passage as marked, then reverse the settings and listen again. Find places where a repeated melody is played loudly the first time and softly the next. Reverse those settings. Make them the same.*

Patterns of louds and softs give balance and shape to music. A staff filled with triplets, for instance, often needs to be turned down relative to its neighbors or it overpowers them. (See for example measures 34 through 50 in Passacaglia —a song based on House of the Rising Sun—on your disk. That song also demonstrates how gradually building volume from the beginning to the end can create drama.)

PART II: ENTERING MUSIC

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Setting Up the Score—Using **New Score** in the **Files** menu produces a score containing one staff with a treble clef and one with a bass clef. The key is C, the time signature is 4/4. (By musical convention, if no key or time signature is written in the first measure, the key is C and the time signature is 4/4)

If you are eager to start creating music, skip ahead to **Entering and Modifying Music on page 16**. If you plan to copy piano music, look also at **Using Two Tracks per Staff on page 25.** Come back here when you want to make some changes to the score. The headings below name the changes you can make.

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Adding and Removing Staffs and Clefs 14
Changing Your Working Space 15
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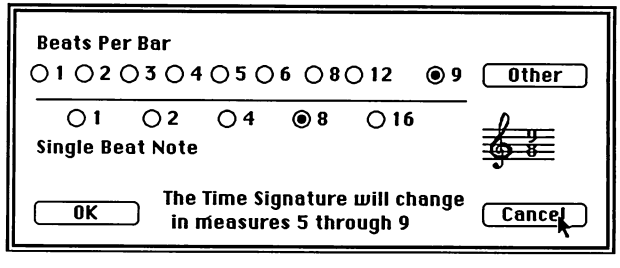
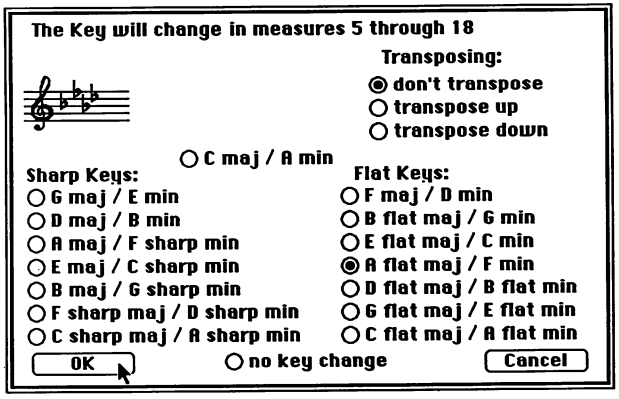
Changing Time and Key Signatures—Use the **arrow** to set the insertion point in a measure. Use **Set Time Signature** or **Set Key Signature** in the **Measures** menu to bring up boxes you can use to assign a time or key signature to that measure.

As you click on options within each box, the staff within the box displays your choice, and the measure numbers tell which measure contains the insertion point or beginning of a selection and which contains the next signature change. Time and key signatures apply to all staffs and stay in effect until changed at a later measure.



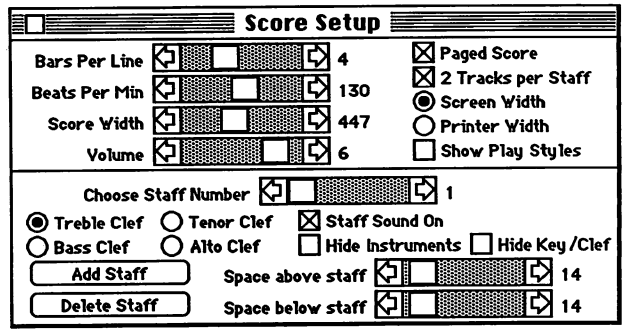
Time signature appears at the beginning of the score as a fraction. Click on one of the numbers in the top row of the time signature box to say how many beats go in each measure. If you don't see the number you want, click on **Other** and enter any whole number up to 99.

Click on a number on the bottom row to say which note gets 1 beat. (For example, 4/4 means "4 beats to the measure, the quarter note gets 1 beat").



Key signature is written into the score as a group of sharps or flats. The key signature box places **C** at the top in the center because it is written with no sharps or flats. The rest are listed below in two columns, sharps on the left, flats on the right. Each entry uses one more sharp or flat than the one just above it in the list.

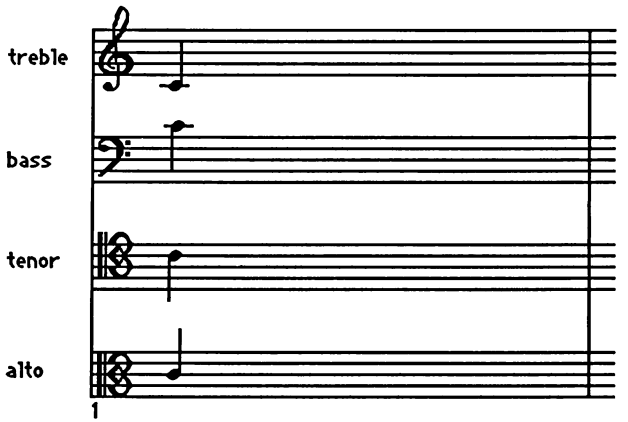
When you change the key signature the program offers you three choices for how to deal with music that's already been entered: **Don't Transpose** means "leave the notes exactly where they are and use sharps, flats or naturals as necessary to keep the melody the same;" **Transpose Up** and **Transpose Down** mean "move the music up or down so it's written in the scale of the new key, letting the sharps or flats in the key signature take care of keeping the melody the same."



Adding and Removing Staffs and Clefs— Use the **Add Staff** button on the lower left in the **Score Setup** window to add staffs to your score. Use **Delete Staff** in that same window to remove staffs from the score.

You can use up to 8 staffs in a song. Remember though that the program can only play 4 notes at a time during playback (unless you are playing through MIDI compatible synthesizers which can handle more than 4 channels). Use **Flash Notes** (see page 5) to see which notes the program is playing if it encounters more than 4 notes at the same vertical position.

To choose a different clef for the beginning of a staff, use the **choose staff number** control in the center of the **Score Setup** window to pick the staff you want, then click on the **clef** (treble, bass, alto or tenor) you want for that staff.



The note shown in each staff represents the same tone—middle C. The names of the other lines and spaces in each clef's staff go alphabetically up and down from middle C, using and repeating the letters A through G. If you change clefs after entering notes, the program will transpose the music to fit the new clef.

To change a clef after the beginning of the score, use the **arrow** to set the insertion point in the measure where you want the change to take place. Then choose **Set Clef** in the **Measures** menu and pick the clef you want from the box which appears.

The measure numbers in the box tell which measure contains the insertion point and which contains the next clef change. For information about copying music that changes clef in the middle of a measure, see page 32.

Changing Your Working Space— If you need more room for notes above or below any of your staffs, open the **Score Setup** window and use the **Choose Staff Number** control to identify the staff you want to change.

Moving the **Space Above Staff** and **Space Below Staff** controls to the right increases the available space and moving them to the left decreases it. The numbers show the amount of space available in pixels. (A standard musical staff is 21 pixels high.)

The **bars per line** control, also in the **Score Setup** window, lets you determine how many measures will be visible on the screen at once. This setting also determines how many measures will be printed per line when you print.

Remember also that you can stretch the horizontal space in any measure by using the **arrow** to grab and slide the bar line.

Choose the number of measures that keeps things from feeling constantly crowded as you work. If you're entering a song with a structure that favors copying and pasting material several measures at a time, leave the Score Setup window out, then use the bars per line setting to make the music fit what you're doing.

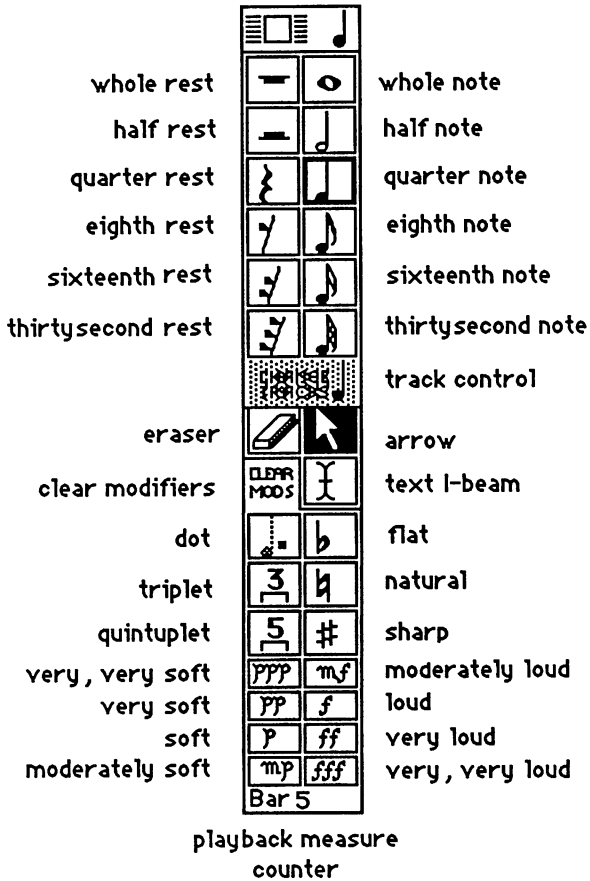
For example, if you need to select several measures for copying, set bars per line so you can drag around all the measures at once. Then when you need to work on individual measures, change the setting back to 2 or 3 bars per line.

(Changing the bars per line will change the way any text you've entered lines up within and between measures. Be sure to return to the setting that displays the text correctly before you print.)

Changing Score Width for Printing—When you get ready to print your music, click a dot next to the **Printing Width** setting. The music will stretch in the display to take advantage of the extra width the paper has relative to the computer screen. (If you plan to enter lyrics or other text, you should set the score to Printing Width first. Changes in score width have no effect on text.)

If you want to look over the score before printing, put an **X** next to **Paged Score** and use the scroll bars to move around. Then use **Print Score** in the **Files** menu. For more information, see **Printing** on page 27.

Entering and Modifying Notes—Click on the **Note Palette** to select the note, rest, modifier or tool you want to use, then click on the score to use it. The cursor shape tells you what you can do as you work.



Basic Note Entry and Editing 17
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Basic Note Entry and Editing—When dropping a note, press instead of clicking to sound the tone and see where it will go. Slide it up and down as necessary, then let go when you have it where you want it. If the **Piano Keyboard** window is open, the corresponding keys flash as you slide the note up and down. (See page 24 for information about using the piano keyboard to enter music.)

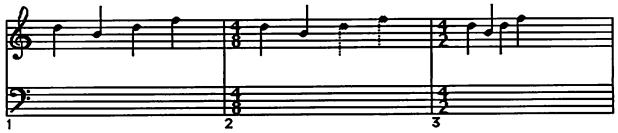
To move a note after you've entered it, grab it with the **arrow** and slide it (or select it and choose the up and down half step and level commands in the Notes menu). To erase a note, select it and press **Backspace** or click on it with the **eraser**.(You can also remove a note from a chord by dragging it on top of another note in the chord.) If you need more (or less) room in a measure, grab the bar line and slide it.

Use the **arrow** to select notes for editing. Point and click to select single notes or chords. Drag a selection box around them to select groups of notes and chords. Selected music is displayed in outline form.

The **Edit, Notes** and **Groups** menus all contain commands which act on whatever music is currently selected. **Half Time** and **Double Time** in the **Notes** menu are especially useful for changing the duration of notes after they've been entered. You can also change the value of an entered note by selecting it with the arrow and then clicking on the new value in the Note Palette while holding down the Command key.

How the Program Positions Notes—Each note and rest in the Note Palette stands for twice as many beats as the note or rest just below it. The bottom number in a measure's time signature tells which note gets one beat for that measure. For example, in 4/4 time, the quarter note gets one beat; in 4/8 time, the eighth note gets one beat, etc.

When you enter a note into the score, the program automatically places it according to the number of beats it represents. That is, in a 4/4 measure, a quarter note is placed so that about 1/4 of the measure lies between it and the next note or bar line, the half note is placed so that about half the space in the measure lies between it and its neighbor, etc.



When the time signature is 4/4, the 4 quarter notes fit perfectly. Change it to 4/8 so that each quarter note stands for 2 beats and two of the quarter notes are greyed. Change it to 4/2 so that each quarter note only stands for half a beat and you have room for 4 more quarter notes.

If you enter a note between existing notes, those notes move to make room. If you place a note directly above or below a note or notes representing the same number of beats, the program joins the stems of the notes, forming a chord. (If **Two Tracks Per Staff** is turned on in the **Score Setup** window, notes with different beats may be at the same vertical position in a staff. See page 25 for more information.)

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*Deluxe Music automatically points note stems up on notes and chords inserted below the middle of the staff and it points them down on those inserted above it. You can change the direction of note stems manually by selecting them with the **arrow** and using **Flip Note Stems** in the **Notes** menu. (See page 25 for information about how note stems are handled when **two tracks per staff** is turned on in the **Score Setup** window.)*

Putting Too Many Notes in a Measure—If you enter a note which pushes the measure's beat total over the limit allowed by the time signature, that note will appear in grey and it will not sound during playback. (You can erase grey notes just as you would normal ones.)

If you don't fill a measure with notes which contain enough beats to add up to the total the time signature calls for, the program will play a rest (i.e., make no sound) for the missing beats at the end of the measure during playback.

Deluxe Music allows you to drag notes horizonatally as well as vertically. If you drag a note horizontally without crossing over another note, the note stays where you drop it. You can use this feature to fine tune the appearance of music before printing it.

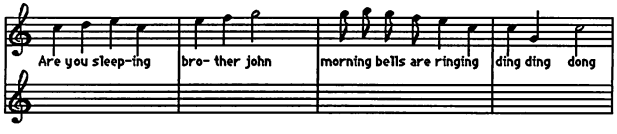
If you drag a note past existing notes, the program realigns the measure accordingly. If you drag a note across a measure boundary before releasing it, Deluxe Music greys notes as necessary to show whether and where the time signature capacity has been exceeded.

Using Cut, Paste and Copy—Because music often makes use of repeated patterns, you'll find the **Cut, Paste and Copy** commands in the **Edit** menu to be very helpful time and energy savers.

Using the **arrow** to select music and then choosing **Cut** removes the selected music from the score and places it on the clipboard, replacing whatever is already there. Using **Copy** replaces the clipboard contents with a copy of the selected music without removing the music from the score. You can also grab a chord and drag a copy of it to a new location by selecting and dragging while holding down the **Option** key.

Using **Paste** inserts a copy of the clipboard contents into the score at the insertion point. If there is selected material in the score when you use **Paste**, the clipboard contents replace the selected material. For more information, see page 35 in the **Menu Command** reference section.

A simple round like "Frere Jacques" (called "Are You Sleeping" or "Brother John" in English) provides a quick demonstration of the power and advantages of using copy and paste to simplify your work.



*Begin by choosing **New Score** in the **Files** menu and then enter the notes in the first measure (the ones that go with the words "Are you sleeping"). Next, select those notes and choose **Copy**. Finally, set the insertion point in the next measure and choose **Paste**.*

*Repeat this process for each of the other three measures. When you finish with the eighth measure, select all the music (choose **Select All**) and choose **Copy** again.*

*Begin working on the bottom staff by using the **arrow** to set the insertion point in the first measure, then choose **Change Clef** in the **Measures** menu to change the clef to **treble**. Next put whole rests in the first two measures. Finally set the insertion point in the third measure and choose **Paste**. Your round is now complete and ready for playback.*

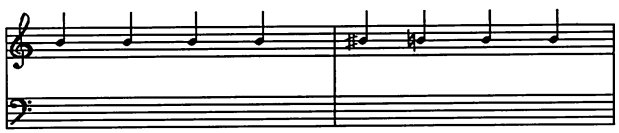
Accidentals (Sharps, Flats & Naturals)— The pitch modifiers are called "accidentals" and are located on the right side of the Palette just below the text insertion I-beam. Sharps mean "play this one half step higher" and flats mean "play it one half step lower." Naturals cancel the effect of sharps and flats.

To sharp or flat a selected note, choose **Up Half Step** or **Down Half Step** in the **Notes** menu. (The program inserts only sharps and naturals if the key signature contains sharps and only flats and naturals if if contains flats.)

To apply an accidental directly—sharp, flat or natural, regardless of the key signature and regardless of whether the note is selected—select the accidental in the Palette, then click on the note you want to modify. To put down a note with the accidental already attached, select first the accidental and then the note in the Palette, then insert the "modified" note into the score.

To remove an accidental, cancel it with another accidental, i.e., remove sharps and flats by clicking on them with naturals, and remove naturals by clicking on them with sharps or flats. To "un-select" an accidental in the Palette, double click on the accidental or click on **Clear Mods**.

Accidentals which are part of the key signature are automatically in effect for all notes written in that key signature. Accidentals which are not part of the key signature are in effect only for the rest of the measure in which they occur.



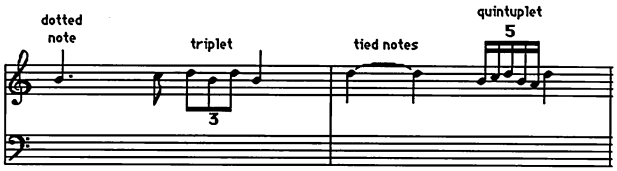
(a) (b)

If notes are entered as shown in (a) and then a sharp is entered as shown in (b), the program automatically adds the natural before the second note to hold the original tone for the rest of the measure. Add a sharp to that note and the natural moves to the next note, etc.

Double sharps and flats are not supported. If you try to add an accidental to a space or line which already contains that accidental in the key signature or earlier in the measure, nothing happens. Also, notes in different measures must each have the appropriate accidental attached to be tied with the Tie Notes command.

When you drag notes which have accidentals attached to them, the accidentals move along with the notes and disappear only if you leave a note on a line or space which already contains that accidental in the key signature. Similarly accidentals appear only when made necessary by an earlier accidental on the same space or line in the same measure.

*When you use the **Up Level** and **Down Level** commands in the **Notes** menu to move groups of notes, any accidentals attached to the notes behave in the same manner.*



Dots, Triplets, Quintuplets & Ties—Three of the note duration modifiers—**Dots, Triplets** and **Quintuplets**—are located on the left side of the Palette just below the **Clear Mods** control. To apply them to notes already in the score, select the modifier from the Palette then click on the note you want to modify.

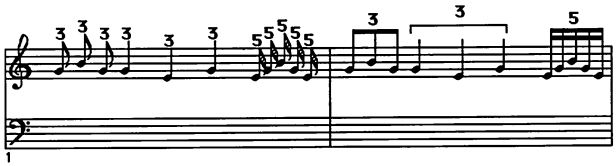
To remove one of the duration modifiers from a note, select the note, then hold down the Command key and click on the modifier in the Note Palette until the modifier disappears from the note. To enter a note with one of these duration modifiers already attached, select the modifier first, then select the note and enter it into the score. To "un-select" a duration modifier in the Palette, double click on it or click on **Clear Mods**.

Consecutive notes on the same space or line can be connected with **Ties.** To tie two or more notes together, drag around them with the **arrow** and select **Tie Notes** in the **Groups** menu. To "un-tie" notes, select any note which belongs to the tie and use the Tie Notes command again.

There is one limit on ties: using them to tie notes into chords will not always produce the desired playback result. The music will look right for printing purposes, but the second note in the tie may be re-attacked during playback as though the tie were not there.

Dots *mean "give this note half again as many beats."* ***Triplets*** *mean "give this note two-thirds as many beats so that three of them total as many beats as two normally would."* ***Quintuplets*** *mean "give this note four-fifths as many beats so that five of them total as many beats as four normally would."* ***Ties*** *mean "sound these notes as though they were one big note containing all their beats."*

In "normal" music triplets and quintuplets almost always appear in groups of 3 or 5. With Deluxe Music, you need not be constrained in this way. As long as the total number of beats in the measure fits with the time signature setting, you may arrange triplet- and quintuplet-value notes in any way you like.



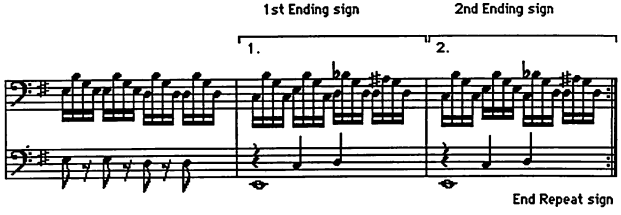
When you make notes part of a triplet or quintuplet, a 3 or 5 appears above the staff for each note, as shown in (a). If the notes are adjacent, you can select them and use the ***Beam Notes*** *command in the* ***Groups*** *menu to beam the notes (or bracket them if the notes don't have flags) and replace the numbers with a single 3 or 5 over the beam (or bracket), as shown in (b).*

Octave Signs, Crescendo & Diminuendo—Sometimes it is convenient to be able to say "play everything under this sign one octave lower or higher than it is written." Use the **arrow** to select the passage you want to change, then choose **Octave Raise** or **Octave Lower** in the **Groups** menu.

The octave up or down sign appears in the score to show which notes are affected. To remove the signs (and their effect), repeat the process (i.e., select the notes and use the Octave Raise or Lower command again).

If you select notes and choose **Crescendo** (<) in the **Groups** menu, it means "grow gradually louder while this is being played." If you choose **Diminuendo** (>) in that same menu, it means "grow gradually softer while this is being played." As with Octave signs, you can remove Crescendo and Diminuendo signs by repeating the process you used to put them in.

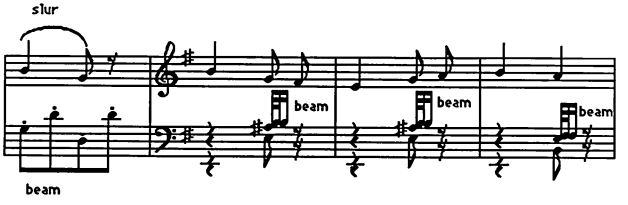
(For more information and information about the *fff* through *ppp* dynamic modifiers in the Note Palette, see Controlling Dynamics on page 11.)



Repeats, 1st & 2nd Endings—When you want a portion of your music to be repeated during playback, use the **arrow** to put the insertion point in the measure at the start of the passage and choose **Begin Repeat** in the **Measures** menu. Then move the insertion point to the measure containing the end of the passage and use **End Repeat** in the same menu.

If you use **Ist Ending** in the **Measures** menu to mark one or more measures between the Begin and End Repeat signs, those measures will only be played the first time through. Measures marked with the **2nd Ending** sign will be played the second time through, but not the first.

The 1st and 2nd Ending signs need not appear only at the end of a repeated section. You might use them at the beginning of a section, for instance, to cause a song to be played with one instrument the first time through and a different instrument the second one. Just start the repeated song or section with 2 copies of the opening measure. Assign 2nd Ending to one of those measures and assign different instruments to each.



Slurs, Beams, & Flipping Note Stems— These commands have more to do with how your music looks than how it sounds. To use these commands, first select the notes you want them to apply to with the **arrow**, then use the appropriate command in the **Groups** menu. To "un-slur" or "un-beam" a group, select a note within the group and use the Slur or Beam Notes command again.

Slurs mean much the same thing the **legato play style** means, i.e.,"play these notes very smoothly, gliding from tone to tone." The effect of slurs is subtle and difficult to hear, especially with some instruments. Using both a slur and the legato play style for the same passage slightly increases the overall effect of smooth overlapping tones.

When you tell Deluxe Music to draw a slur, it draws it on the side of the note heads for the affected notes. Once drawn it stays on the same side of the staff even if you flip the note stems (with the **Flip Note Stems** command in the **Notes** menu). If you decide you want a slur moved to the other side, remove it, flip the notes, then put it back.

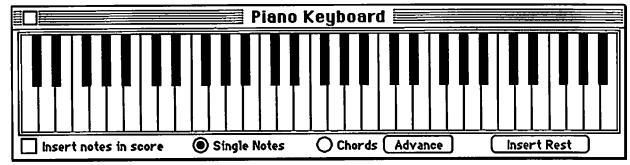
Beams are typically used to join flagged notes to show that they belong to the same beat. They have no effect on the way the music sounds when it plays and are meant as a music reading aid. They make it easier to see the patterns in the rhythmic structure of a song.

Deluxe Music will not draw beams across bar lines nor will it draw them to connect notes which belong to different staffs. If you select notes which belong to more than one measure and/or staff and then use Beam Notes, all notes will be beamed within the measure they belong to.

Choose **Flip Note Stems** in the **Notes** menu to reverse the stem direction for any currently selected notes. If the selection includes notes with stems pointing in both directions, using Flip Note Stems first points all the stems in the same direction. Using it again reverses that direction.

You can use slurs at any time while composing, but you might want to wait, as a general rule, until you are reasonably sure that you have the notes where you want them. Moving notes in and out of slurs is not recommended.

There is one additional limit on slurs. Sometimes the shape of the music makes it impossible for the program to draw the slur without drawing across some of the notes. If you don't like the way the slur looks no matter which way you flip the stems before and after applying it, remove the slur and rewrite it as a series of shorter slurs.



Using the Piano Keyboard—To open the keyboard or bring it to the top, use the **Piano Keyboard** command in the **Window** menu. For information about using the keyboard during playback, see the discussion of visual feedback on page 5.

If you want to use the piano keyboard to insert notes into the score, click an **X** into the **insert notes in score** box on the lower left of the keyboard. Then use the **arrow** to set the insertion point in a measure and click on a piano keyboard key to insert the corresponding note into the score at that point.

The duration of the note (half note, quarter note, etc.) is determined by the selection in the **Note Palette**. To enter a rest of that same duration, click on **rest**. To enter more than one note at the same vertical position to form a chord, click an **X** in the **Chord** box. When **Chord** is turned on, click on **Advance** to move the insertion point to the next available position.

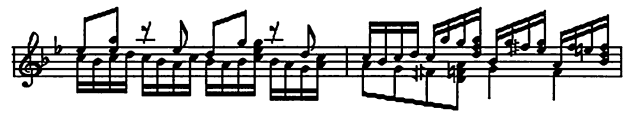
If you are good at singing the note durations in your head before you enter them, you will probably find this computer keyboard shortcut very helpful: ***1*** *selects the* ***whole note*** *in the Palette,* ***2*** *the* ***half note****, etc.*

You may want to use the piano keyboard to pick out a tune on the keys without worrying about the duration of the notes at first. You can then play the music back, stopping and changing note values until it sounds the way you want it. To change the duration of a note which has already been entered into the score, select it and click on the new duration you want in the Palette while holding down the Command key.

If a change in note duration causes a measure to have too many beats, use the ***arrow*** *to set the insertion point in front of the greyed notes, then use* ***Split Measure*** *to put a measure boundary line (a "bar line") at that point.*

If a measure no longer has enough beats in it, select some music in it and in a neighbor, then choose ***Join Measure*** *to remove the bar line separating the two.*

Entering Two Tracks per Staff—Some written music, piano music in particular, does allow notes with different beat values to be written directly above and below each other in the same staff. The result is separate rhythmic tracks, each with the right number of total beats to fit the time signature, in one staff.



All the notes whose stems point up belong to track 1 and all those with stems down belong to track 2. You can use ***Flip Note Stems*** *in the Notes menu to change a stem's direction if you want. Notice that you can have chords in both tracks.*

Deluxe Music will allows up to two such tracks of music in each staff in the score if you click an **X** into the **Two Tracks per Staff** box in the **Score Setup** window. When this control is on, use the **Change Tracks** control in the middle of the **Note Palette** when you want to tell the program that the next note goes in a different track.

To select notes in a single track, click on one note to select it, then click on another while holding down the Shift key. All the notes in between will be automatically selected. Once you've selected notes in a track, you may use **Cut, Paste** and **Copy** in the **Edit** menu and all of the commands in the **Notes** menu. (When you paste a track into a staff, whether it is pasted in as track 1 or track 2 depends on which way the note stems are pointing in the Note Palette, just as it does when you are entering notes.)

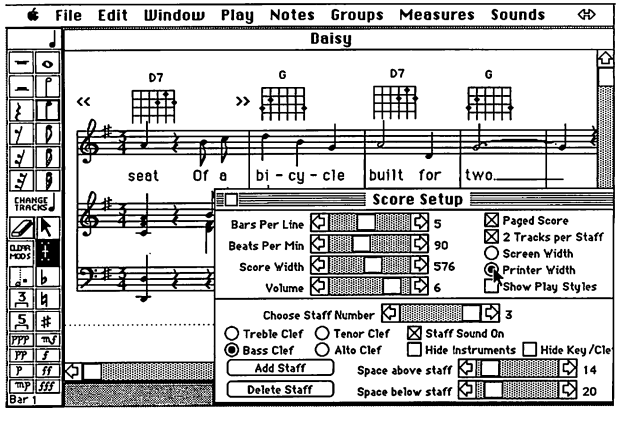
The "shift-click" selection technique is often helpful when working with two-track-per-staff music. It lets you select just the group of notes you want from a measure crowded with music. If you select a note in one track and then shift-click on a note in another track, all the intervening notes in both tracks will be selected.

The ability to slide notes horizontally and rests vertically also comes in handy when working with two-track music. Printed music is subtle stuff. It's often desirable to be able to move a rest so it doesn't land on top of a note in another track, or to move a half note off of a quarter note so that a player will know for sure how to count the measure.

(If you only want to move the notes temporarily, so you can get at the ones beneath to select them for instance, choose ***Realign Measure*** *in the* ***Measures*** *menu when you're through.)*

Part III: Adding Lyrics and Printing

Setting Up for Printing 27
Entering Lyrics 27
Polishing Score Appearance 29



Setting Up for Printing—Before you enter lyrics or other text, click on **printing width** in the **Score Setup** window. Doing so "stretches" your music out to take advantage of the extra width available for printing on an 8 1/2 by 11 inch piece of paper.

If the paper in your printer is centered, the music will be printed with 1/4 inch left and right margins. If you want wider or narrower margins, use the **score width** control to choose the exact width you want. The width is measured in pixels. There are 72 pixels to the inch.

Putting an **X** by **Paged** in the **Score Setup** window causes the score to be displayed one line under the other as it will be printed. The number of measures on each line is determined by the **bars per line** control (and the widths of any individual measures which have been hand set by moving the bar line).

Use **hide instruments** to turn off instrument names for any staff(s) before printing. Use **hide clef/key** to hide the clef, key signature and time signature for any staff(s).

If you want to remove tempo markings before printing, first make all the tempo settings within the song equal to the first one. Next copy the measure containing that tempo marking (it will be the only measure left with a tempo marking). Finally, Cut that measure and Paste the copy down in its place.

Entering Lyrics—Selecting the text insertion tool (the **I-beam**) from the **Note Palette** (it's just below the **arrow**) allows you to enter text anywhere in the score. While the **I-beam** is selected, a **Fonts** menu replaces the **Sounds** menu in the menu bar.

Using Text Boxes—Clicking on the score with the **I-beam** opens a text box, clicking within the box sets the insertion point, typing inserts text at that point. Normal **Cut, Paste** and **Copy** are supported.

Centering the **I-beam** over the handle on the upper left of the text box and dragging lets you move the box. Centering the **I-beam** over the handle on the lower right of the text box and dragging stretches the text box. (If you have the I-beam properly centered over a handle, the box border will begin to flash when you press the mouse button.)

When you click outside a box, the border and white background disappears, leaving any text you've entered behind. Any music or other text which the text box overlapped will then show through. To reselect the box so you can edit the text, click anywhere on the text with the **I-beam**. To select all the text within an active text box, choose **Select All** in the **Edit** menu.

Generally you'll want to stretch a long box underneath an entire line for entering lyrics. Doing so guarantees that the text will line up straight across the page. Here's how:

Put down a box and stretch it to the screen border, then scroll forward and stretch it to the end of the musical line. To type in your lyrics, simply go back to the beginning, then type, space and scroll your way down the line to put the words under the notes as you want them.

Changing Font, Size and Style—When the **I-beam** is selected in the Palette, the **Sounds** menu is replaced by a **Fonts** menu. The fonts in the System will be listed in the menu. You can use Font Mover with the Deluxe Music Construction Set disk as you would any other. Three of the fonts, **DMCS GuitarFret, Symbols** and **Music**, were constructed especially for Deluxe Music.

When you change style or size while a text box is active, the new setting applies to everything in the box.

DMCS GuitarFret Font—If you select **Guitar-Fret** in the **Fonts** menu, you get a font with the following characters:

Shift 1	Γ	Shift 4	⊕
Shift 2	T	Shift 5	⊕
Shift 3	⊤	Shift 6	⊕
Shift 7	♭	Shift 8	#
Uppercase A-G. Numbers 0-9.			

To type a blank fret layout (after choosing the Guitar Fret font), start each line with Shift-1, then type Shift-2 four times, then end with a Shift-3 and a Return. Repeat for each line. Replacing Shift-1, 2 or 3 with Shift-4, 5 or 6 respectively produces the symbol for a fingered fret at that position.

You can edit a fret layout just like any other text. To replace empty frets with marked ones for instance, select each one you want to change and type over it with the matching "marked fret" symbol. (Or, if you find it easier, put the insertion point to the right of each one you want to change, then use backspace and type the new one you want.)

DMCS Symbols Font—Use this font to enter special musical symbols in your score.

Top letter row

w	–		
e			
r		R	
t		T	tr
y			
u			
o			
p		P	

Middle letter row

a	Λ	A	>
s			
d		D	D.S.
f			
g			
;			

—continued in next column—

Bottom letter row

z		Z	
x			
c	D.C.	C	
v			
b	V	B	
m			

The numbers produce miniature versions of themselves:

1234567890

DMCS Music Font—This is the font Deluxe Music uses to draw the screen.

Polishing Score Appearance—Deluxe Music lets you drag notes horizontally, and rests both horizontally and vertically as you wish to make room for accidentals and to resolve conflict between symbols in different tracks.

You'll often find it helpful to begin your repositioning work by grabbing the bar line and sliding it to give yourself more room in the measure. Then you can slide the bar back to tighten things up after you've finished making your changes.

To return a measure to its original width and note spacing, identify it with the insertion point (or by selecting some music in it) and choose **Realign Measure** in the **Measures** menu.

PART V: REACHING OUT TO BOOKS, MUSIC AND MUSICIANS FOR HELP AND INSPIRATION

Help from Friends and Teachers 30
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Copying Written Music 31
Dealing with Copying Problems 32

Help from Friends and Teachers— Singing in the choir, taking instrument lessons and playing with a group are only three of the ways people traditionally get help from each other as they learn music. There are no traditions yet for learning music through stretchable singing score paper, so you'll have to create your own. Still, existing rituals provide some useful models.

Taking lessons, for instance, works partly because it commits you to regular practice (it's embarrassing not to know more than you did at the last lesson) and partly because it gives you thoughtful, guiding responses to that practice (if you found a good teacher).

Anyone who already knows what you want to learn is potentially a teacher. So look for people who know about the kind of music you want to write, and talk them into assigning you tasks and responding to your work. If they help, keep going to them. If they don't, look for someone else. The only unbreakable rule is, don't skip practice.

Playing at recitals works because it commits you to a public sharing of your work. There's a real difference between practicing a piece to play for your teacher one on one and practicing to play it on a particular date in front of a crowd, even a small one.

Public performance demands a finished piece, and learning to finish is as important as sticking to practice. So give yourself deadlines and publish your work for all the friends and strangers you can talk into listening.

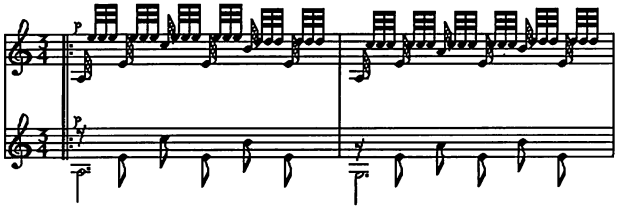
Finding Help in Books—There are good books about music theory and composition in most libraries and large bookstores, particularly ones associated with colleges and universities which have music departments. And more than a few musical instrument stores have a theory bin in their music sections.

One of the most straight-forward and helpful books, especially for beginners, is **Composing Music** by William Russo (Prentice-Hall, Inc., Englewood Cliffs, NJ 07632, Copyright 1983, $12.95 in paperback). Russo is a composer/arranger whose work was one of the best reasons for paying attention to the Stan Kenton band in the 50's. His book assumes almost no musical training and provides a series of interesting step-by-step exercises designed to build your knowledge and skill in sensible chunks.

Russo's book contains a bibliography of other sources. A short, inexpensive reference book worth adding to his list is **Every Musician's Handbook** (Amsco Publications, New York, Copyright 1984, distributed in the U.S. by Music Sales Corporation, 24 East 22nd Street, New York, NY 10010.)

Copying Written Music — A trip to almost any kind of music store will turn up printed music you can copy with your program. If you live in a large city, a trip to the store where band, choir and orchestra directors shop will turn up more music than you can copy in a lifetime.

Copying should not be underestimated as a route to figuring out how music works. Music is made up of repeating patterns. Learning to use the Copy, Paste, and Up and Down Level commands to take advantage of those repeated patterns has the happy effect of saving you work while focusing your attention on the very characteristics of the music that give it sense and cohesion.



Almost every measure in Tarrega's Recuerdos de la Alhambra (a popular classical guitar study) contains the same note duration pattern. Once you've entered one measure, you can use Copy, note sliding and the Up and Down Level commands to make all the rest.

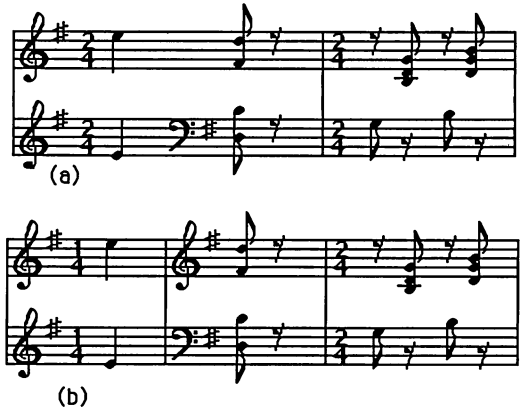
When searching for music to copy, keep an eye out for the offbeat and imaginative. A book called **Baroque Folk** for instance (Willard Palmer, Alfred Publishers, 1969), yielded the arrangement of "House of the Rising Sun" on the program disk (it's the song named "Passacaglia"). The book demonstrates classical forms by using them with familiar folk tunes. Written to provide a bridge to the classics for young piano players, it is no less useful to beginning composers interested in how such music is put together.

And don't confine your search to the piano bins. If you have access to a large music store, take a look in places like the recorder and woodwind sections as well. Thanks to the tradition of group practice in the instrumental world, you can find quite a lot of two, three and four voice music in the duets, trios and quartets written for instruments which can play only one note at a time.

One reminder. If you use the program to share music with others, you assume the responsibility of knowing and obeying the copyright laws which apply.

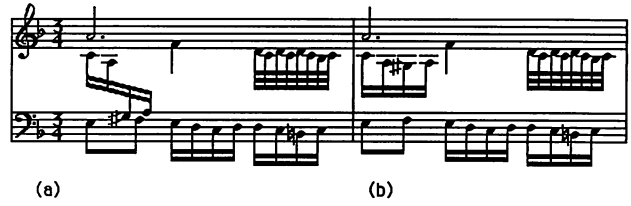
Dealing with Copying Problems— Printed music contains a few writing conventions which must be adapted to fit within the measure oriented rules in Deluxe Music. Here's how to deal with some of those situations.

Middle of the Measure Clef Changes—The solution is straight-forward: create two measures whose beats add up to the same as one normal measure, then change time signatures until things make sense.

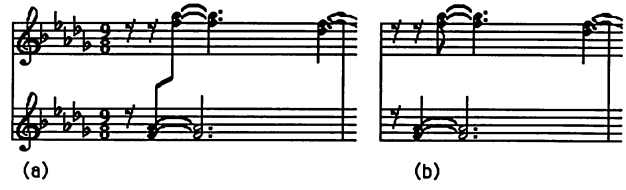


If the printed music looks like (a), use Split Measure and Set Time Signature (in the Measures menu) to fix it to look like (b). This technique can also be used for changing instruments more frequently than the basic time signature allows.

When Beams Cross Between Staffs—Some piano music uses beams which cross staff boundaries to indicate notes which belong to the same musical group but which should be played by different hands. Differing arrangements of these can cause differing problems.



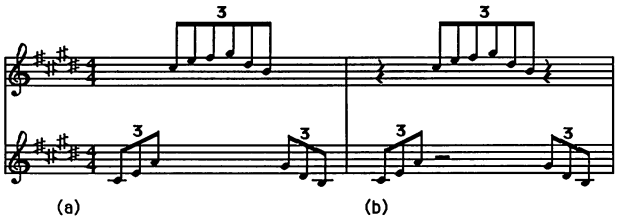
In (a)—a measure from Fugue 6 in the First Book of Bach's Well Tempered Clavier—the solution is simple. Just write all the notes in the beam in the measure the beam started in, as shown in (b).



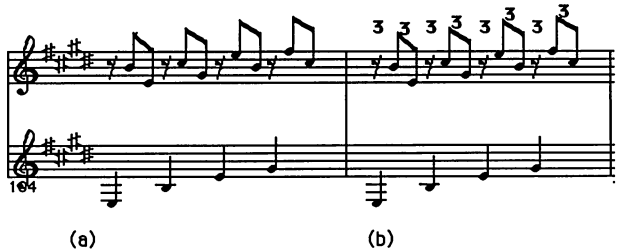
(a) shows the first measure of Debussy's Clair De Lune as it is usually written. (b) shows how that same measure might be rewritten with Deluxe Music. The bottom measure was filled out by changing the value of the first notes from an eighth to a quarter in order to maintain the effect of the tie to the half notes.

Music with More than Two Tracks in a Staff—Occasionally composers may insert a third rhythmic track into a staff for a few measures. (Music written for classical guitar may even have a third track for an entire piece.) Again the solution is simple: just add a staff and put the third track into it.

Watch out for Missing Rests and "Hidden" Triplets—Composers don't always follow the "letter of the law" in music notation. They assume that the human being reading the score can use experience and common sense to know when a rest is implied rather than written or when a group of notes or notes and rests is meant as a triplet even though it's not marked as such.



(a) shows the first measure of Debussy's 1st Arabesque as it is usually written. (b) shows how to include rests in both staffs so the music will play properly. (Of course, you could simply put all the notes in the top staff.)



a) shows a measure near the end of the same piece as it is usually written. The measure seems to have too many beats in it, but in fact each eighth note and rest belongs to a triplet and should be entered into Deluxe Music as shown in (b).

PART V: REFERENCE GUIDE TO THE DELUXE MUSIC COMMANDS

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Keyboard Shortcuts

Press **Backspace** to erase all selected notes and rests.

Press **Enter** to switch from any other Palette selection to the **arrow**. Press Enter again to switch to the currently selected note.

Hold down **Option** while grabbing and dragging a note or chord to make a copy of it.

Press **1** to select the whole note, **2** for the half note, **3** for the quarter note, **4** for the eighth note, **5** for the sixteenth note and **6** for the thirty-second note. Press the **Shift** key with each number to select the corresponding rest.

Select a note, then hold down the **Command** key while clicking in the **Note Palette** to change the modifier or value for the selected note. If the modifier is already there, doing this will remove it.

During playback, press the **space bar** to stop play, freezing the display on the portion being played at that instant and selecting the note being played at that instant.

See the right hand side of the menus for command-key combinations for many of the commands there.

The File Menu

New Score opens a new, untitled score. Each new score appears with a treble and bass staff and one empty measure. The key is set to C and the time signature to 4/4.

Open Score... brings up a directory of the Deluxe Music scores saved on the disk in the active drive. Select the one you want and click on **Open.** To leave the directory without opening a score, click **Cancel**.

Close puts away the active score.

Save stores the current score on the disk, saving changes and replacing the old copy of the score with the same name.

Save As... brings up a window in which you can name a score and save it under that name. You must use this command the first time you save an untitled score. You may use it at any time to save a version of the score under a different name and/or onto a different disk.

Revert reloads the score from the disk; that is, it restores the score to the condition it was in when you last saved it.

Print Score... creates a printed copy of the current score. For more information, see page 27.

The Edit Menu

Undo reverses your most recent action in the Edit, Notes, or Measures Menu. It also reverses your most recent entry or deletion of musical material. (Undo does not reverse Cut. Use Paste to undo Cut.)

Cut removes all selected notes and rests and places them on the Clipboard, replacing the Clipboard's current contents, if any. It also removes any measures left empty by the cut, plus any other empty measures in the song.

Copy places a copy of all selected notes and rests on the Clipboard, replacing the Clipboard's current contents, if any. Unlike Cut, Copy doesn't remove anything from the score.

Paste inserts the contents of the Clipboard into your score at the insertion point. If you have a selection in the score when you Paste, the Clipboard contents will replace the selected material (think of it as "pasting over" the selection).

If the Clipboard contains less than a measure, Paste puts the Clipboard contents completely within the measure containing the insertion point or the first measure containing a selection. If the resulting measure contains more beats than the time signature calls for, the notes or rests containing those beats will be greyed.

If the Clipboard contents begin or end with a full measure, Paste will begin or end with a measure bar. If the Clipboard contains material from more than one measure, Paste will insert the material exactly as it is on the Clipboard, measure bars and all.

If the Clipboard contains material from more than one staff, the Clipboard contents will be inserted into the corresponding staffs during Paste. If Paste does not find a corresponding staff for some of the material, it will not paste that material down. In other words, Paste does not add staffs to accommodate the selection on the Clipboard.

If **Two Tracks Per Staff** is turned on in the **Score Setup** window and the clipboard contains a single track, Paste pastes that track into the score according to the direction the note stems are pointing in the Note Palette. If there's already music there which belongs to that track, the clipboard contents will be inserted in front of that material.

Clear removes the current selection like Cut but does not leave a copy on the Clipboard (nor does it remove the empty measures).

Select All selects all the musical material in a score. If a text box is active within the score window, this command selects all the text material in that box instead.

The Window Menu -- When you select a window from the Window menu, Deluxe Music opens that window, or brings it to the top if it is already open.

(Unlike some windows you may have worked with, "being on top" and "being active" don't mean the same thing in this program. Any part of a Deluxe Music Construction Set window which is visible is also active. To bring a window to the top, click on its title bar or on an unused space in the window, or choose its command in the Window menu.)

Score—This is the main composition window of Deluxe Music. It contains the score, which holds the music you play and compose. You can insert musical material directly into it, and you can manipulate material already inserted. For more information, see Entering and Modifying Music on page 16.

Measures in the Score Window are "smart". They "know" how many beats the time signature calls for and how many beats they already contain. If an insertion or a Paste results in too many beats in the measure, the notes or rests containing the excess will be greyed out and will not be played during playback.

If there are fewer beats than the time signature calls for, the missing beats will be played as rests at the end of the measure during playback. For more information, see **Set Time Signature** (page 42), and **Split Measure** and **Join Measures** (page 43).

The Score SetUp Window—The controls in the top half of the window apply to the entire score. Those in the bottom half apply to the staff indicated by the **Choose Staff Number** control in the center.

Bars per Line can be set from 1 to 10 to determine how many measures you can see at once on the screen and how many will be printed per line on paper.

An **X** in the **Paged Score** box tells the program to display the music as it will appear when printed instead of as a score which scrolls continuously from left to right.

An X in the **Two Tracks per Staff** box sets the score so that two separate rhythmic tracks of music can be entered in each staff.

Score Width lets you set the width of a paged score to any setting between 40 and 1000 A dot in the **Screen Width** button sets the score width so that all the bars per line called for in that setting can be seen in the Score window. A dot in the **Printing Width** button sets the score to a width which will produce a printed score with 1/4 inch margins on 8 1/2 by 11 paper. The width is measured in pixels. There are 72 pixels in an inch.

Beats per Minute lets you tell the program how fast to play music in the score. If you use this control during playback, the change will be heard immediately. **Volume** lets you control the overall volume level of the playback. If you are using an external amplifier, set the volume here to 0 to 2 for best results.

Choose Staff Number lets you tell the program which staff you want the other settings in the lower half of the window to apply to. The top staff is number 1, the next is number 2, etc. up to 8.

Treble, Bass, Tenor and **Alto** let you choose the beginning clef for the staff indicated by the Choose Staff Number control. You can change clefs within a staff by using the **Change Clef** command in the **Measures** menu.

Add Staff adds a staff to the score. (New staffs always appear with a treble clef. Be sure to use the clef setting to pick the clef you want.) Scores can contain up to 8 staffs.

Delete Staff removes the staff indicated by the Choose Staff Number box.

Use **Staff Sound On** to turn the sound on and off for particular staffs during playback. First pick the staff you want with **Choose Staff Number**, then click the X off to turn off the sound for that staff. Click again to put the X back and turn the sound on again.

Use **Hide Instruments** to hide all the instrument names for the staff indicated by the Choose Staff Number control.

Use **Hide Clef/Key** to hide the clef and key signature for the staff indicated by the Choose Staff Number control..

Space Above Staff and **Space Below Staff** let you individually determine how much space appears above and below each staff to fit the needs of your music. Changes made here are instantly reflected on the screen.

The available space is measured in pixels. A standard note head is 5 pixels high.

The Note Palette—The top part of this window contains corresponding note and rest values, the bottom part contains note modifiers and dynamic modifiers, and the middle part contains the tools you will need as you work.

To make a selection in the Palette, point and click. The most recently selected item is displayed in reverse video (white for black and black for white). Any modifier selections which remain active are displayed with a black border.

To turn off a modifier selection, double click on it or click on **Clear Mods**.

If the pointer has the shape of a **note** or **rest**, pointing and clicking on the score will add the note or rest to the staff. If the pointer has the shape of a **modifier**, pointing and clicking on a note will add that modifier to the note. The dynamic modifiers, *ff, mf,* etc., are applied to staff position rather than notes.

To erase individual notes or rests, select them and press Backspace or click on them with the eraser. To add a premodified note to the staff (e.g., a sharped, flatted or dotted note), first select the modifier and then the note, then click on the staff.

To remove a modifier from a note, select the note then click on the modifier in the Note Palette while holding down the Command key until the modifier disappears from the note in the score.

If the **arrow** is selected in the Palette, you can select individual notes or chords in the score by clicking on them and groups of notes and chords by dragging a selection box around them. Use commands in the **Edit, Notes** and **Groups** menus to act on selected notes.

When you have **two tracks per staff** turned on in the **Score Setup** window, click on **Change Tracks** in the Palette to tell the program you want the next note to be entered in a different track from the last. In each staff, the notes in track one are entered stem up and those in track two are entered stem down.

Click on the **I-beam** (just below the **arrow**) to add text. **Fonts** will replace **Sounds** in the menu. Dragging with the I-beam creates a text box. Clicking inside the box sets the insertion point. Cut, Paste and Copy are supported. To move a box, drag it by the handle on the upper left. To resize one, drag the handle on the lower right. To re-select a box, click on any of its text.

The Piano Keyboard—This window contains a five-octave keyboard. If you turn on **Player Piano** in the **Play** menu, the appropriate piano keys flash whenever you play a song or a section of a song. During composition, the appropriate keys flash when notes are placed in the score.

You can also use the piano keyboard window to enter notes and rests into the score window. Set the insertion point with the **arrow**, click an **X** by **insert notes in the score** on the piano keyboard, then click on the piano keys.

Notes at the corresponding pitch will be inserted into the score as you "play" the piano with your mouse. The note duration value is determined by the selection in the **Note Palette**. Click on **Rest** to insert a rest of the same value.

Click an **X** by **Chords** to tell the program that you want to insert several notes at the same vertical position to make a chord. When Chords is turned on, use **Advance** to move the insertion point to the next available position in the staff.

If **Two Tracks per Staff** is turned on in the **Score Setup** window, notes are entered in the track indicated by the direction of the note stems in the Note Palette.

The keyboard makes the sound of the instrument checked in the **Sounds** menu. To change the play style for the keyboard sound, use **Keyboard Play Style** in that same menu.

Memory Usage—This window contains information about the amount of RAM available for your composition. The first line tells how much memory you still have available. The second line tells how much memory is currently being used by the song itself. The third line tells how much memory is being used by instruments. The fourth line tells how much memory is being used by the Clipboard.

Tie Notes is the only command in the Groups menu which does not use additional RAM. Also, instruments are especially RAM intensive.

The Play Menu

Play Song plays the score currently in the Score Window.

Play Section plays the part of the song specified with the "Begin Section" and "End Section" marks. (<< and >>)

Stop Play stops the playback and displays the score as it was when Play Song or Section was chosen. Pressing the Space Bar stops playback and brings the part of the score currently being played into the score window, selecting the note being played at that instant.

Begin Section and **End Section** are used to define a section for playback with the "Play Section" command. "Begin Section" marks the measure containing the insertion point or the first note or rest in a selection. "End Section" marks the measure containing the insertion point or the last note or rest in a selection.

Flash Notes can be turned on and off (a check mark indicates "on"). When "Flash Notes" is on, using "Play Song" causes a representation of the music to flash through a measureless staff display as the score is played. Using "Stop Play" replaces the note representations being flashed with their counterparts in the score and paints the rest of the score around them.

Using "Play Section" while "Flash Notes" is on produces a different result. The score remains visible and stationary and the reverse video rectangle flashes around the notes themselves as the score is played (provided that the section is in the display, of course). A note flashes until its tone stops sounding.

Player Piano can be turned on and off (a check mark indicates "on"). When "Player Piano" is on, the Piano Keyboard Window is displayed and the piano keys are highlighted as the corresponding notes are played in the score.

To avoid slowing down the music during playback, bring the piano keyboard window to the top before you start the playback. The keys remain highlighted for the duration of the note value they represent.

Repeat Play can be turned on and off (a check mark indicates "on"). When "Repeat Play" is on, using either "Play Song" or "Play Section" causes the music to cycle repeatedly until you use "Stop Play".

Resume Play plays the score from the measure which was being played when "Stop Play" was used or the space bar was pressed.

External Speaker causes the music to be played one octave higher than normal when it is <u>not</u> checked. Use it especially to play music through your computer's internal speaker when the music has notes too low for the internal speaker's range.

If you are connecting to external speakers through a stereo system, you"ll want to adjust the **volume** control in the **Score Setup** window. A lower setting (2, or perhaps even lower) will improve your ability to smoothly control overall volume through your stereo's amplifier. When you start the program, this command is turned on (i.e., there's a check by it in the menu).

The Notes Menu—All commands in the Notes menu act on notes which have been selected.

Up Half Step and **Down Half Step** raise all selected notes one half step, the smallest interval in Western music. (Adjacent piano keys are one half step apart.) The program writes in an accidental as necessary to show the change. These commands only produce sharps and naturals if the key signature is written with sharps, and they only produce flats and naturals if the key signature is written with flats.

Up Level and **Down Level** raise and lower all selected notes to the next vertical position in the staff (the next space or line). Accidentals move right along with the notes they modify.

Up Octave and **Down Octave** raise and lower all selected notes one full octave (12 half steps). **Invert Chord Up** raises the lowest note in a chord one octave. **Invert Chord Down** lowers the highest tone in a chord one octave. If the chord already contains that note, the note being moved is placed an octave above or below the second note in the chord.

Measures built of sequences of chords which are inversions of each other are quite harmonius. To hear for yourself, use Copy and Paste to put down 2 or 3 measures of a chord, then use the invert chord commands to change some of the chords. Mark your short "song" with Begin and End Section, then turn on Repeat Play and choose Play Section. Invert some of the chords from time to time to hear the result.

Half Time changes selected notes and rests to one half their current duration. For example, half notes become quarter notes.

Double Time changes selected notes and rests to twice their current duration. For example, half notes become whole notes.

Flip Note Stem inverts the stems of the selected notes. In a score set for one track per staff, the program automatically flips all notes below the middle of any staff up, and all above the middle of any staff down. If there are two tracks per staff, the program automatically displays notes in the first track with their stems up and the notes in the second track with their stems down.

If you use this command with notes selected which have stems pointing in both directions, all the stems will first be pointed in the same direction. Using the command again reverses that direction.

Set Play Style brings up a box with which you can pick a play style for the selected notes. When you click on **OK** the play style number will be written above every note it applies to (or below each one in track 2 music). To turn off the numbers before printing, click off the **X** by the **show play styles** control in the **Score Setup** window. (This will also cause all notes assigned the staccato play style to be displayed with standard staccato markings.)

The Groups Menu—All commands in the Groups menu can be turned on and off, and all act on notes which have been selected with the **arrow.** To turn off a group command, you only need to select one note in the group and use the command again.

Tie Notes joins selected notes of the same pitch and instructs the program to sound them as one continuous tone.

Beam Notes connects selected notes with a horizontal line. It has no effect on the way the program sounds the notes. Most printed orchestral music uses beams to connect notes which belong to the same beat.

Slur Notes draws a curved line over two or more selected notes and instructs the program to make the sound glide smoothly from note to note during playback. (The audible effect of this command is subtle and difficult to hear with some instruments.)

Slurs are drawn on the side of the note heads and once drawn they stay on the same side of the staff even if the note stems are flipped.

Octave Raise and **Octave Lower** mark the selected notes to be played back an octave higher or lower than they are written.

Crescendo and **Diminuendo** mark the selected notes to be played successively louder (crescendo) or softer (diminuendo). The volume change begins from the volume setting in effect where the crescendo or diminuendo sign starts and it ends with *fff* or *ppp* unless a dynamic modifier is placed within the sign. In that case it ends with the volume level indicated by that dynamic modifier.

The Measures Menu

Set Time Signature... allows you to set a time signature for all the staffs in the score beginning with the measure containing the insertion point when this command is used. It will stay in effect until a different time signature is set in a subsequent measure.

Click on a number in the top row of the time signature box to determine how many beats each measure must contain. If you don't see the number you need, click on **Other** and type in any whole number up to 99.

Click on a number on the bottom to name the note value worth one beat. (So 4/4 means 4 beats to the measure, quarter note gets one beat. And 6/8 means 6 beats to the measure, 8th note gets one beat.)

Set Key Signature... allows you to set a key signature which will take effect beginning with the measure containing the insertion point when this command is used. It will stay in effect until a different key signature is set in a subsequent measure.

As you mark different signatures in the key signature box, their corresponding sharp or flat pattern appears in the measure on the upper left. Click OK when you see the one you want.

If there is already music in the affected measures, click on **Don't Transpose** to leave the notes and the intervals they represent exactly as they are. Click on **Transpose Up** or **Down** to move the music up or down to the scale of the new key.

Set Clef... brings up a box from which you can choose among four clefs: treble, bass, alto and tenor. Click OK to place the selected clef in the score at the measure containing the insertion point. The clef will remain in effect until a different clef is inserted into the same staff in a later measure.

Set Instrument allows you to assign different instruments from the Sounds Menu (including MIDI channels and presets) to individual staffs in your score. The instrument setting takes effect for the instrument checked in the sounds menu, beginning with the measure containing the insertion point when this command is used. An instrument remains in effect for a staff until a different instrument is set in a subsequent measure of the staff.

Set Tempo assigns the current **beats per minute** setting to the currently selected measure. The new setting will remain in effect until a you make another change in a later measure. The setting appears in the score above the the staff (expressed as a quarter note equal to the number of beats per minute) when this command is used.

Insert Measure inserts a measure (into every staff in the score) in front of the measure containing the insertion point.

Split Measure inserts a bar line at the insertion point. **Join Measure** removes the bar lines that separate adjacent measures containing selected notes.

Delete Measure erases the measure(s) containing the insertion point or selected notes.

Realign Measure restores the indicated measure to standard length and replaces all the notes proportionally according to their duration values.

Begin Repeat inserts a "begin repeat" symbol in the measure containing the insertion point. **End Repeat** inserts an "end repeat" symbol in the measure containing the insertion point. The program plays the music which lies between the symbols twice before proceeding to new music, if any.

1st Ending and **2nd Ending** are used in conjunction with the repeat signs. The "1st Ending" marker can be applied to any measures between the repeat signs to say "play this only the first time through." The "2nd Ending" marker can be applied to any measure you want played the second time through but not the first.

The Sounds Menu

No Instruments Are Loaded will appear in grey in this menu if no instruments are currently loaded. If you use "Play Song" or "Play Section" with no instruments loaded, the program will load an instrument for you.

Harpsithizer, Flute, etc. As instruments are loaded, their names appear here. The one checked is the one which will be assigned to a staff if you use the "Set Instrument" command. And it's the one which will be removed from the menu if you use the "Remove Instrument" command.

Load Instrument... brings up a window containing a directory of the Deluxe Music instruments. Select the instrument you want and click on "Open". To leave the window without loading an instrument, click on "Cancel". The instruments you load with this command will be added to the Sounds Menu. When a song is saved, its instruments are saved with it.

Remove Instrument removes the checked instrument from the Sounds Menu instrument list.

Keyboard Play Style lets you set the play style you hear for the checked instrument when you click on the keys of the Piano Keyboard.

MIDI Channel 1 reflects the channel currently set with the Set MIDI Channel command. A check by this command adds the Set MIDI Channel and MIDI Preset commands to the sounds menu. Also, when this command is checked, using the Set Instrument command in the Measures menu assigns the indicated MIDI channel to the measure(s) containing the insertion point or selected notes.

Set Midi Channel brings up a box from which you may choose any of 16 different channels. The number of the channel currently chosen is reflected in the Midi Channel command in the middle of the menu.

MIDI Preset reflects changes made in the box it brings up when you choose it. The program adheres to the standard of 127 preset instruments, numbered from 1 to 128. If you type 0 in the MIDI Preset box, the menu will read **No MIDI Preset** and none will be assigned. You may not use the same channel/preset combination in the same measure number for different staffs.

The Fonts Menu—When the text insertion pointer is selected in the note Palette, this menu replaces the Sounds Menu in the program menu bar. It lists all the fonts available in your system file. For information about using the special guitar fret font and music symbol font that came on your program disk, see page 28.

Set Size brings up a box you use to set the size for the font you are using in the active text box. The font sizes in the system file appear as radio buttons. Just click the one you want, or type a number into the little box at the bottom.

If you ask for a size not in the system file, the program generates the font as best it can by scaling up or down from a size it has. You cannot use more than one font size in a single box.

Set Style brings up a window you can use to set the style (italic, underline, etc.) for the font in use in the active text box. You cannot use more than one combination of styles in a single box.

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Computer Terms

Click—Quickly press and release the mouse button. A double-click is two quick clicks in succession.

Drag—Move the mouse while holding down the button.

Insertion Point—The blinking vertical line that indicates which measure the Measure commands affect and where new material will be inserted into the score. To set the insertion point in a particular location in the score, point to that location with the arrow and click the mouse button.

Press—Hold down the mouse button.

Select—Point at a note or chord and click, or drag a selection box around a group of notes and/or chords. To select more music than can be seen on the screen at once, select material at one end, next scroll forward or backward, then select material at the other end while holding down the Shift key.

Shift-Click—hold down a shift key on your computer keyboard while clicking with your mouse.

Musical Terms

Accidental—a symbol written to the left of a note indicating a change in pitch. A sharp raises pitch by one half step, a flat lowers pitch by one half step. A natural cancels the effect of a sharp or flat.

Bar—a synonym for *measure.*

Bar line—the vertical line drawn through a staff to indicate where one measure stops and the next starts.

Beam—horizontal line(s) connecting normally flagged notes which belong to the same metric unit.

Beat—the basic unit of musical time. See *tempo* and *time signature.*

Chord—technically, three or more notes played simultaneously. In this manual, the term also applies to two notes played simultaneously.

Clef—a symbol which indicates the pitch of the tones on the staff where it resides.

Duration—the length of time a note sounds. See *time signature.*

Dynamics—variations in the loudness and softness of music.

Flat—see *accidental.*

Half Step—the smallest interval in traditional Western music. A synonym for *semitone.* Half steps occur naturally between the 3rd and 4th tones and 7th and 8th tones in a standard scale.

Head—see "note head."

Interval—the distance in pitch between two tones.

Key Signature—the sharps or flats which appear at the beginning of a each staff or staff section indicating the key for the song or section of a song.

Legato—play smoothly, without interruption.

Measure—the space between two bar lines.

Meter—the regular grouping of beats into measures. See *time signature.*

Natural—see *accidental.*

Note—a symbol which represents the pitch and duration of a musical sound.

Note Head—the round part of the note which indicates its duration value.

Note Stem—the horizontal line extending up or down from the note head. For eighth and shorter notes, the note's duration value is indicated by flags on the stem.

Octave—the interval between two tones which have the same letter name. There are twelve half steps in an octave.

Pitch—the term used to describe the relative highness or lowness of a note.

Quintuplet—typically a group of 5 sixteenth notes to be played in the space normally occupied by 4. In Deluxe Music, any note or rest marked with the quintuplet sign is played at 4/5ths of its normal duration value.

Rest—a symbol indicating the absence of sound for a particular length of time.

Scale—an upward or downward progression of notes in regulated steps.

Semitone—see *half step.*

Sharp—see *accidental.*

Staccato—play as short, distinct tones.

Staff—the group of 5 lines and 4 spaces on which notes are written.

Stem—see *note stem.*

Tempo—the speed of song, the pace at which it is performed.

Tie—a curved line connecting two notes of the same pitch indicating that the tone is to be held for the number of beats represented by their combined value.

Time Signature—the numbers appearing at the beginning of a song or song section which indicate how many beats there are in each measure (shown by the top number) and which note gets one beat (the bottom number). E.g., 4/4 time means 4 beats per measure and the quarter note gets one beat.

Transpose—rewrite a song in a different key from the one in which it was previously written.

Triplet—typically a group of 3 eighth notes to be played in the space normally occupied by 2. In Deluxe Music, any note or rest marked with the triplet symbol is played for 2/3rds of its normal duration value.

Tremolo—quavering; rapid repitition of a note.

Vibrato—wavering tone.

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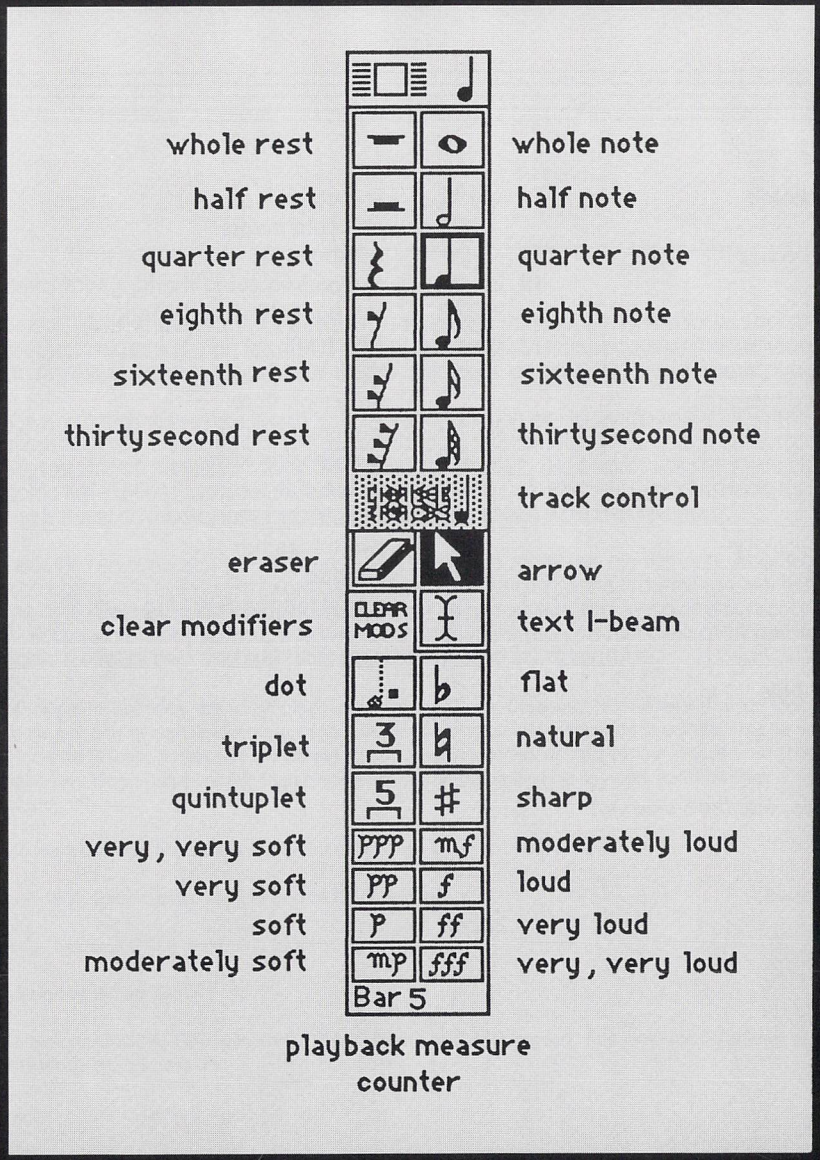

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